



# UNITED STATES PATENT AND TRADEMARK OFFICE

80  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,021	02/02/2001	Geoffrey B. Rhoads	P0305	7386
23735	7590	03/04/2005	EXAMINER	
DIGIMARC CORPORATION 9405 SW GEMINI DRIVE BEAVERTON, OR 97008			PYZOWCHA, MICHAEL J	
			ART UNIT	PAPER NUMBER
			2137	

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/776,021	RHOADS, GEOFFREY B.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Pyzocha	2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 18 November 2004.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-44 is/are pending in the application.  
 4a) Of the above claim(s) 27 and 39 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-26,28-38 and 40-44 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
     Paper No(s)/Mail Date 11182004.
- 4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

Art Unit: 2137

**DETAILED ACTION**

1. Claims 1-44 are pending.
2. Amendment filed 11/18/2004 has been received and considered.

***Election/Restrictions***

3. Newly submitted claims 27 and 39 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 27 and 39 related to the remaining claims as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, the invention of claims 1-26, 28-38 and 40-44 has separate utility such as encoding the photograph without using the pre-exposed emulsion media of claims 27 and 39. See MPEP § 806.05(d).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 27 and 39 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Art Unit: 2137

***Claim Objections***

4. Based on amendments to claims 21 and 33 the objections have been withdrawn.

***Claim Rejections - 35 USC § 112***

5. Based on the amendments the rejections under 35 USC 112 have been withdrawn.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 18-21, 23-24, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton (U.S. 5,646,997) and further in view of Seth-Smith et al (US 4890319).

As per claim 18, Barton discloses encoding a photograph with a steganographic message, (see column 6 lines 51-60); the message identifies a corresponding message in a database (see

Art Unit: 2137

column 2 lines 64-67), and the database record detailing information relating to the photograph (see column 6 lines 51-60).

Barton fails to disclose the message can be correctly decoded despite alteration of the image that alters a representation of the steganographic message.

However, Seth-Smith et al teach a method to reduce system errors caused by alterations (see column 14 lines 61-68).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Seth-Smith et al's method of encoding to encode the images of Barton.

Motivation to do so would have been to reduce overall system errors.

As per claim 19, the modified Barton and Seth-Smith et al system discloses the message comprising an index number (see Barton column 6 lines 51-60).

As per claim 20, the modified Barton and Seth-Smith et al system discloses the information identifies the person associated with the corresponding image (see Barton column 6 lines 51-60).

As per claim 21, the modified Barton and Seth-Smith et al system discloses the person being the photographer (see Barton

Art Unit: 2137

column 6 lines 51-60 where "the creator of the block" would be the photographer; the creator of the image).

As per claim 23, the modified Barton and Seth-Smith et al system discloses the steganographic message conveying plural digital bits (see Barton column 6 lines 51-60).

As per claim 24, the modified Barton and Seth-Smith et al system discloses the message being dispersed across the corresponding image (see Barton column 7 lines 31-33).

As per claim 28, the modified Barton and Seth-Smith et al system discloses a computer storage medium having computer instructions for performing the method (see Barton column 9 lines 48-55).

8. Claims 1-6, 9-16, 29-33, 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton further in view of Seth-Smith et al and further in view of NEKO (webpage poster).

As per claim 1, Barton discloses encoding an image with a steganographic message (see column 6 lines 51-60 where the data block can be an image as described in column 4 lines 58-65 and a photographic image is described in column 1 lines 23-33) and the steganographic message associates information with each image (see column 6 lines 51-60 where the meta-data is associated with each image).

Art Unit: 2137

Barton fails to disclose the creation of a photo collage with plural photographic images printed on a common page and the steganographic image being robust so it could be printed.

However, NEKO discloses a photographic collage with multiple images (see NEKO page 1) and Seth-Smith et al disclose a robust encoding (see column 14 lines 61-68).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the steganographic process of Barton with the creation of NEKO's photo collage and the robust encoding of Seth-Smith et al.

Motivation to do so would have been to prevent the unauthorized use and distribution of a document (see Barton column 1 lines 45-51) and to reduce overall system errors (see Seth-Smith et al column 14 lines 61-68).

As per claim 2, the modified Barton, Seth-Smith et al and NEKO method discloses the information identifies the person associated with the corresponding image (see Barton column 6 lines 51-60).

As per claim 3, the modified Barton, Seth-Smith et al and NEKO method discloses the person being the photographer (see Barton column 6 lines 51-60 where "the creator of the block" would be the photographer; the creator of the image).

Art Unit: 2137

As per claim 4, the modified Barton, Seth-Smith et al and NEKO method discloses the information associated with each image being stored as a record in a database (see Barton column 2 lines 64-67 where the meta-data is as described in column 6 lines 51-60).

As per claim 5, the modified Barton, Seth-Smith et al and NEKO method discloses the steganographic message conveying plural digital bits (see Barton column 6 lines 51-60).

As per claim 6, the modified Barton, Seth-Smith et al and NEKO method discloses the message being dispersed across the corresponding image (see Barton column 7 lines 31-33).

As per claim 9, the modified Barton, Seth-Smith et al and NEKO method discloses a computer storage medium having computer instructions for performing the method (see Barton column 9 lines 48-55).

As per claim 10, the modified Barton, Seth-Smith et al and NEKO method discloses a photo collage being produced (see NEKO page 1).  
)

As per claim 11, the modified Barton, Seth-Smith et al and NEKO method discloses a storage medium having a photo collage stored on it with plural photographic images (see NEKO page 1), each embedded with a steganographic message and the messages associate information corresponding to each image (see Barton

Art Unit: 2137

column 6 lines 51-60) wherein the message can be correctly decoded despite alterations (see Seth-Smith et al column 14 lines 60-68).

As per claim 12, the modified Barton, Seth-Smith et al and NEKO method discloses the information identifies the person associated with the corresponding image (see Barton column 6 lines 51-60).

As per claim 13, the modified Barton, Seth-Smith et al and NEKO method discloses the person being the photographer (see Barton column 6 lines 51-60 where "the creator of the block" would be the photographer; the creator of the image).

As per claim 14, the modified Barton, Seth-Smith et al and NEKO method discloses the information associated with each image being stored as a record in a database (see Barton column 2 lines 64-67 where the meta-data is as described in column 6 lines 51-60).

As per claim 15, the modified Barton, Seth-Smith et al and NEKO method discloses the steganographic message conveying plural digital bits (see Barton column 6 lines 51-60).

As per claim 16, the modified Barton, Seth-Smith et al and NEKO method discloses the message being dispersed across the corresponding image (see Barton column 7 lines 31-33).

Art Unit: 2137

As per claim 29, the modified Barton, Seth-Smith et al and NEKO method discloses a photo collage being produced (see NEKO page 1).

As per claim 30, the modified Barton, Seth-Smith et al and NEKO method discloses a storage medium with a photograph represented on it (see Barton column 1 lines 15-32 and NEKO page 1), encoding a photograph with a steganographic message, (see Barton column 6 lines 51-60), the message identifies a corresponding message in a database (see Barton column 2 lines 64-67), and the database record detailing information relating to the photograph (see Barton column 6 lines 51-60) wherein the message can be correctly decoded despite alterations (see Seth-Smith et al column 14 lines 60-68).

As per claim 31, the modified Barton, Seth-Smith et al and NEKO method discloses the message comprising an index number (see Barton column 6 lines 51-60).

As per claim 32, the modified Barton, Seth-Smith et al and NEKO method discloses the information identifies the person associated with the corresponding image (see Barton column 6 lines 51-60).

As per claim 33, the modified Barton, Seth-Smith et al and NEKO method discloses the person being the photographer (see

Art Unit: 2137

Barton column 6 lines 51-60 where "the creator of the block" would be the photographer; the creator of the image).

As per claim 35, the modified Barton, Seth-Smith et al and NEKO method discloses the steganographic message conveying plural digital bits (see Barton column 6 lines 51-60).

As per claim 36, the modified Barton, Seth-Smith et al and NEKO method discloses the message being dispersed across the corresponding image (see Barton column 7 lines 31-33).

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Barton and Seth-Smith et al system as applied to claim 18 above, and further in view of Tetrick et al (U.S. 4,675,746).

As per claim 22, Barton and Seth-Smith et al fail to disclose the information relating to the photograph including contact information.

However Tetrick et al discloses the information relating to the photograph including contact information (see column 5 lines 4-22 where the alphanumeric data is as described in column 2 lines 64-66).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the contact information of Tetrick et al with the method for encoding a message of the Barton and Seth-Smith et al system.

Art Unit: 2137

Motivation to do so would have been to allow for confirming the authenticity of the image (see Tetrick et al column 5 lines 14-17).

10. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton and Seth-Smith et al as applied to claim 18 above, and further in view of Braudaway et al (U.S. 5,530,759).

As per claim 25, Barton and Seth-Smith et al method fail to disclose the use of pseudo-random noise when encoding.

However Braudaway et al discloses the use of pseudo-random noise when encoding (see column 5 lines 41-60).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the pseudo-random noise of Braudaway et al when encoding the message of Barton and Seth-Smith et al.

Motivation to do so would be to adjust the difficulty of removing the message (see column 5 lines 48-56).

As per claims 26, the modified Barton, Seth-Smith et al and Braudaway et al method discloses the encoding changes the luminance of a majority of the pixels in each photographic image (see Braudaway et al column 2 lines 6-14 and column 5 lines 6-15).

Art Unit: 2137

11. Claims 7-8, 17, 37-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Barton, Seth-Smith et al and NEKO method as applied to claims 1, 11, 30 above, and further in view of Braudaway et al (U.S. 5,530,759).

As per claims 7, 17, and 37 the modified Barton, Seth-Smith et al and NEKO method fails to disclose the use of pseudo-random noise when encoding.

However Braudaway et al discloses the use of pseudo-random noise when encoding (see column 5 lines 41-60).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the pseudo-random noise of Braudaway et al when encoding the message of the modified Barton, Seth-Smith et al and NEKO method.

Motivation to do so would be to adjust the difficulty of removing the message (see column 5 lines 48-56).

As per claims 8 and 38, the modified Barton, Seth-Smith et al, NEKO and Braudaway et al method discloses the encoding changes the luminance of a majority of the pixels in each photographic image (see Braudaway et al column 2 lines 6-14 and column 5 lines 6-15).

12. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Barton, Seth-Smith et al and NEKO

Art Unit: 2137

method as applied to claim 30 above, and further in view of Tetrick et al (U.S. 4,675,746).

As per claim 34, the modified Barton, Seth-Smith et al and NEKO method fails to disclose the information relating to the photograph including contact information.

However Tetrick et al discloses the information relating to the photograph including contact information (see column 5 lines 4-22 where the alphanumeric data is as described in column 2 lines 64-66).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the contact information of Tetrick et al with the method for encoding a message of Barton, Seth-Smith et al and NEKO.

Motivation to do so would have been to allow for confirming the authenticity of the image (see Tetrick et al column 5 lines 14-17).

13. Claims 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barton in further view of Seth-Smith et al and further in view of Conner et al (U.S. 5,579,393).

As per claim 40, Barton discloses storing an image (see column 1 lines 15-32), encoding a photograph with a steganographic message, (see column 6 lines 51-60), and the

Art Unit: 2137

message aids in the authentication of the image (see column 5 lines 58-67).

Barton fails to disclose the images specifically being medical images and the message being correctly decodable despite alteration.

However, Conner et al discloses the use of medical images (see column 2 lines 19-39) and Seth-Smith et al disclose decoding despite alterations (see column 14 lines 60-68).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the method of authentication from Barton with the medical files of Conner et al and the encoding method of Seth-Smith et al.

Motivation to do so would have been to reduce the chances of fraudulent medical documents being transferred (see Conner et al column 1 lines 53-65) and to reduce system errors (see Seth Smith column 14 lines 60-68).

As per claim 41, the modified Barton, Seth-Smith et al and Conner et al discloses the message aiding in protecting the image from tampering (see Barton column 5 lines 32-41).

As per claim 42, the modified Barton, Seth-Smith et al and Conner et al discloses the message being dispersed across the corresponding image (see Barton column 7 lines 31-33).

Art Unit: 2137

14. Claims 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Barton, Seth-Smith et al and Conner et al method as applied to claim 40 above, and further in view of Braudaway et al.

As per claim 43, the modified Barton, Seth-Smith et al and Conner et al method fails to disclose the use of pseudo-random noise when encoding.

However Braudaway et al discloses the use of pseudo-random noise when encoding (see column 5 lines 41-60).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the pseudo-random noise of Braudaway et al when encoding the message of the modified Barton, Seth-Smith et al and Conner et al method.

Motivation to do so would be to adjust the difficulty of removing the message (see column 5 lines 48-56).

As per claim 44, the modified Barton, Seth-Smith et al, Conner et al and Braudaway et al method discloses the encoding changes the luminance of a majority of the pixels in each photographic image (see Braudaway et al column 2 lines 6-14 and column 5 lines 6-15).

Art Unit: 2137

***Response to Arguments***

15. Applicant's arguments with respect to claims 1-44 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP



**ANDREW CALDWELL**  
**SUPERVISORY PATENT EXAMINER**